

GRADE LEVEL TECHNOLOGY SKILLS

from the Salem Public Schools Technology Plan 2008 - 2012

GRADE K

- Use keyboards and other common input and output devices effectively and efficiently.
- Identify the keyboard, mouse, monitor and printer.
- Point, click and move mouse.
- Demonstrate responsible use of technology and work cooperatively with others when using technology.
- Take turns when using software.

GRADE 1

- Explore keyboard using both hands.
- Locate letters and numbers on the keyboard.
- Use a CD and CD drive.
- Identify the menu bar.
- Begin to print documents with support.
- Open/quit an application program.
- Use developmentally appropriate terminology as new concepts are introduced.
- Respect the work of your peers.
- Work with a partner on a project.
- Explore drawing tools in teacher directed activities.
- Use age-appropriate multimedia software to support curriculum.

GRADE 2

- Use both hands on the keyboard.
- Insert a floppy disk.
- Save to a floppy disk or hard drive with support.
- Send information to a printer.
- Introduce access to the Internet.
- Refer to parts of the computer and peripheral equipment by name.
- Respond to another's work in a positive way.
- Introduce word processing through teacher directed activities.
- Use teacher created templates.
- Use age-appropriate multimedia software to support curriculum.
- Introduce the Internet as an information resource through teacher demonstration.

GRADE 3

- Open/close appropriate software applications and navigate using scroll bars, arrow keys, special keys and mouse.
- Create and name folders with support.
- Use developmentally appropriate terminology as new concepts are introduced.
- Follow classroom rules for responsible use of computers.
- Cite sources of information and begin to discuss copyright issues.
- Develop word processing skills to facilitate the writing process.
- Introduce spell check dictionary.
- Insert images from within the application.
- Collect, enter and manipulate data in a teacher-created database.
- Use multimedia software to create a simple slide show.
- Use the Internet to gather information for curriculum projects using teacher-selected sites.
- Gather information from a variety of sources, including teacher-selected web sites, CD-ROM

encyclopedias, books, etc.

- Use content appropriate software to introduce students to research skills.

GRADE 4

- Begin formal keyboarding skills.
- Use a scanner and digital camera with support.
- Understand how to choose a printer.
- Locate and save to a designated folder independently.
- Use appropriate vocabulary in reference to hardware, software applications and the Internet.
- Follow classroom rules for responsible and ethical use of computers (responsible behavior around equipment, respect for other people's work, and appropriate collaborative behavior).
- Develop word processing formatting skills.
- Create a simple database with support.
- Collect, enter and manipulate data in a teacher-created spreadsheet.
- Collect and enter information in a teacher-created slide show.
- Use and print from an encyclopedia CD or the Internet for a curriculum related project.
- Participate in a basic online project.
- Use curriculum appropriate Internet sites.
- Use an Internet search engine.

GRADE 5

- Intermediate keyboarding.
- Use a scanned or digital image in a curriculum project with support.
- Use developmentally appropriate terminology as new concepts are introduced.
- Follow classroom rules for responsible and ethical use of computers (responsible behavior around equipment, respect for other people's work, and appropriate collaborative behavior).
- Develop beginning desktop publishing skills, such as multiple columns in a newspaper, brochure or book format.
- Use thesaurus and dictionary tools.
- Create a simple database to use in a curriculum project.
- Create a simple spreadsheet related to a curriculum project.
- Create a multimedia project using text, graphics and resources from CDs and the Internet with teacher support.
- Participate in a curriculum related online project.
- Understand and demonstrate the advantages or disadvantages to using various types of reference materials.
- Evaluate and interpret information gathered from a search engine.

Grade 6

- Demonstrate efficient keyboarding skills.
- Format / initialize disks.
- Save a file to the desktop, the hard drive, and floppy disk.
- Select a printer and print a document with appropriate page setup and orientation
- Understand the basic differences of computer operating systems.
- Understand concept and function of connectivity and networking (via Intranet, Internet World Wide Web).
- Identify appropriate operating system icons and symbols.
- Understand and use appropriate terminology in speaking about operating systems, software applications, peripherals and electronic communications
- Follow classroom rules for responsible and ethical use of computers (responsible behavior around equipment, respect for other people's work, and appropriate collaborative behavior).
- Develop intermediate word processing skills, such as copy/paste, bulleting, and outlining.
- Create a simple database using a variety of field types and access the information using a variety of different search strategies.
- Create a spreadsheet and use data to prepare a graph for a curriculum related project.
- Create a simple multimedia presentation using text and appropriate graphics.
- Use multimedia software applications to organize information into graphs, tables, diagrams and charts with guidance.
- Use content specific tools (e.g.: simulation software, measuring devices) to enhance learning.
- Students use with guidance a variety of media to collaborate, publish and communicate their learning.
- Explore appropriate types of electronic reference materials for curriculum projects.
- Understand how to navigate and search on the Internet using the features of browsers.
- Use content specific tools, measuring devices, to gather and record data.
- Use productivity software to collect, evaluate and analyze information to demonstrate learning with guidance.
- Include citations to document resources used.
- Discuss the possibility that information gathered from technology sources may not be accurate.

Grade 7

- Operate peripheral equipment (e.g., scanners, digital cameras, camcorders, etc.)
- Use editing and formatting features in applications to produce visually effective documents.
- Save a file to the desktop, the hard drive, file server and appropriate external media.
- Insert media (graphics, video, sound) into documents with support.
- Begin to select appropriate software/ hardware to create a variety of documents.
- Continue to develop additional appropriate terminology.
- Follow classroom rules for responsible and ethical use of computers (responsible behavior around equipment, respect for other people's work, and appropriate collaborative behavior).
- Continue intermediate word processing skills, such as formatting tools, and adding graphics to text.
- Use a complex database to manipulate information using the "sort" command.
- Use a spreadsheet to organize and access data.
- Create a more complex multimedia presentation using text and appropriate graphics.
- Use content specific tools (e.g.: geometric software) to enhance learning
- Students will select with guidance from a variety of media to collaborate, publish and communicate their learning.
- Identify basic elements of a Web Site (URL, hyperlinks, site map).
- Bookmark sites for future reference.
- Compare and contrast the results from different search engines.
- Choose appropriate productivity software to collect, evaluate and analyze information to demonstrate learning.
- Cite sources using correct format.

- Compare and contrast various technology resources for accuracy, relevance, and appropriateness.
- Select and use a variety of technology tools in curriculum exhibitions.

Grade 8

- Insert media (graphics, video, sound) into documents.
- Identify and solve common hardware and software problems (e.g., frozen screen, disk error, printing problems.)
- Continue to develop additional appropriate terminology
- Follow classroom rules for responsible and ethical use of computers (responsible behavior around equipment, respect for other people's work, and appropriate collaborative behavior).
- Continue intermediate word processing skills, such as headers, footers and page numbers.
- Create and manipulate a complex database with multiple field types.
- Use formulas for basic spreadsheet calculations, such as SUM, AVERAGE, PRODUCT and DIFFERENCE formulas for ranges of cells.
- Create an appropriately labeled graph using spreadsheet data.
- Use multimedia software to create links among various pieces of information in a presentation.
- Use content specific tools (e.g.: environmental probes) to enhance learning.
- Students will select with guidance from a variety of media to collaborate, publish and communicate their learning.
- Identify electronic sources of information and choose appropriate sources to find relevant and current information on a subject.
- Use productivity software to collect, evaluate and analyze information to demonstrate learning.
- Cite sources using correct format.
- Decide which resources to utilize in creating exhibitions.
- Use advanced features of computer graphics application to modify a drawing, painting or photograph.
- Select and use a variety of technology tools in curriculum exhibitions.

GRADE 9

- Demonstrate keyboarding proficiency in technique and posture.
- Use a variety of external peripherals and understand how they connect to the computer.
- Back up files.
- Format disks for multiple operating systems and save documents to allow translation in multiple operating systems.
- Use multiple applications simultaneously and navigate among them.
- Demonstrate an understanding of the concepts of file size, application size and memory needed for an operation.
- Follow classroom rules for responsible and ethical use of computers (responsible behavior around equipment, respect for other people's work, and appropriate collaborative behavior).
- Demonstrate a clear understanding of the District's Acceptable Use Policy (return signed AUP form).
- Site electronic sources correctly using MLA formatting for text and images gathered from electronic sources.
- Discuss copyright issues and the specific limitations for text, music and video.
- Plan, create and edit documents created in word processing program using readable fonts, alignment, page set up, tabs, and ruler settings.
- Customize thesaurus and dictionary tools.
- Create an original database, defining field formats and adding new records.
- Use features such as sort, filter, and find.
- Create an original spreadsheet, entering formulas and functions.
- Format columns and rows.
- Customize formatting of charts or graphs created in a spreadsheet.
- Use components of multimedia software (e.g., text, graphics, sound, video, and animation) to design a project.
- Participate in a variety of curriculum-based online projects with guidance.
- Use technologies such as e-mail, professional interchange networks, and research databases to access and exchange information.
- Select appropriate electronic sources with guidance. (e.g. web sites, online periodicals databases, and online catalogs.)
- Select and use search engines with guidance. Understand the differences between search engines.
- Introduce effective search strategies to locate and retrieve information using Boolean logic operators.
- Use bookmarks that have been organized into folders for further reference.
- Demonstrate the ability to identify the source, location and media type
- Use technology tools to create and modify solutions to problems.
- Organize ideas and plan projects with brainstorming, outlining or concept-mapping software.

GRADE 10

- Connect external peripherals (printers, zip drives, scanner, digital camera, projectors, etc.) to a computer.
- Create directories and folders on local hard drive, removable media and network.
- Demonstrate a basic understanding of how files, printers and applications can be shared on a network.
- Demonstrate file management skills (e.g. compress and expand files as needed and download files when appropriate).
- Follow classroom rules for responsible and ethical use of computers (responsible behavior around equipment, respect for other people's work, and appropriate collaborative behavior).
- Demonstrate a clear understanding of the District's Acceptable Use Policy .
- Demonstrate and explain copyright laws/issues and model ethical acquisition and use of digital information.

- Import/export and link data between word-processed document and other applications.
- Save (retrieve, load, import) documents in different file formats (RTF, HTML, etc.).
- Apply database features such as mailing labels and mail merges.
- Sort and query information in a database.
- Select and create graphs and charts appropriate to a curriculum project.
- Create and manipulate illustrations with computer graphics software (adjust scale, size, shape, etc.) for a multimedia presentation.
- Participate in a variety of curriculum-based online projects.
- Share text, graphics and sound files as attachments in an e-mail message.
- Select appropriate electronic sources. (e.g. web sites, online periodicals databases, and online catalogs.).
- Select and use search engines independently.
- Apply and explain appropriate electronic search strategies in the acquisition of information including keywords and Boolean search strategies.
- Organize bookmarks into folders for further reference.
- Evaluate the acquired information for accuracy, relevance, appropriateness and bias.
- Evaluate when to use technology and determine the appropriate tools and resources.
- Use calendars, time management or project management software to assist in conducting an inquiry.

GRADE 11

- Operate independently subject specific peripheral input devices and other equipment (e.g., digital cameras, camcorders, probes, midi keyboards, graphic tablets, etc.).
- Choose appropriate software preferences or properties.
- Ability to transport files from one computer station to another computer station that lacks network support
- Follow classroom rules for responsible and ethical use of computers (responsible behavior around equipment, respect for other people's work, and appropriate collaborative behavior).
- Identify ways in which technology is widely used in the workplace and in society.
- Demonstrate a clear understanding of the District's Acceptable Use Policy.
- Demonstrate an ability to evaluate various media resources, such as web sites, text, sound, images, video and animation for appropriateness, accuracy, and non -bias.
- Create and integrate databases, graphics, and spreadsheets into word processing documents to manage information and create reports.
- Utilize different views of a database (list, data).
- Import/ export and link data to and from a spreadsheet.
- Import text, sound, video and graphics from a variety of sources into a multimedia presentation.
- Collaborate with peers, experts and others online regarding a curriculum-based project.
- Demonstrate the function of electronic conferencing tools such as electronic bulletin boards, FTP, video conferencing, listservs and newsgroups.
- Collect, organize, analyze and graphically present technology research information using available productivity tools.
- Demonstrate the ability to access, operate and manipulate information from secondary storage devices including CD-ROM and online catalogs.
- Integrate with correct citations electronic resource results including primary source material in curriculum projects.
- Demonstrate how specialized technology tools can be used for problem-solving, decision-making and creativity.

GRADE 12

- Understand and use subject specific peripheral input devices and other equipment as required through individual course selection.
- Identify and use methods for transferring, downloading, and converting graphics, sound and video files.

- Apply basic troubleshooting strategies for the hardware and software components of the computer system.
- Resolve commonly occurring error messages.
- Follow classroom rules for responsible and ethical use of computers (responsible behavior around equipment, respect for other people's work, and appropriate collaborative behavior).
- Demonstrate a clear understanding of the District's Acceptable Use Policy .
- Demonstrate an understanding of the consequences regarding copyright violations, including computer hacking, computer piracy, intentional virus setting and invasion of privacy.
- Use advanced word processing skills to create a research paper including footnotes, citations, and style sheets.
- Copy database structure but not data.
- Use advanced formatting features of a spreadsheet application. (e.g. reposition columns and rows, add and name worksheet)
- Research, plan, create, edit and present a polished multimedia presentation.
- Collaborate with others via electronic conferencing or discussion groups (bulletin boards, listservs or interactive video).
- Present information, ideas and results of work using a variety of communications technologies (e.g. multimedia presentations, web pages, videotapes, desktop published documents).
- Justify the use of technology research tools to locate, evaluate and collect information from a variety of sources, to process data and to report results.
- Resolve information conflicts and validate information through accessing, researching and comparing.
- Evaluate when to use specialized technology tools for problem solving, decision-making and creativity.